UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,252	11/26/2003	Brian C. Demsky	MIS-00401	6061

7590   05/11/2006

MUIRHEAD AND SATURNELLI, LLC
200 FRIBERG PARKWAY
SUITE 1001
WESTBOROUGH, MA 01581

EXAMINER
BONZO, BRYCE P

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)
Advisory Action Before the Filing of an Appeal Brief		10/723,252	DEMSKY ET AL.
		Examiner	**Art Unit**	
		Bryce P. Bonzo	2113	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED <u>4/26/06</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

    a) ☒ The period for reply expires <u>6</u> months from the mailing date of the final rejection.

    b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

    Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

<u>NOTICE OF APPEAL</u>

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

<u>AMENDMENTS</u>

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because

    (a)☒ They raise new issues that would require further consideration and/or search (see NOTE below);

    (b)☐ They raise the issue of new matter (see NOTE below);

    (c)☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

    (d)☐ They present additional claims without canceling a corresponding number of finally rejected claims.

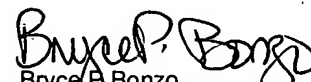   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

    The status of the claim(s) is (or will be) as follows:

    Claim(s) allowed: <u>4,6,16-19,25,29,31,32,34-38,42,44,54-57,63,67 and 69-76</u>.

    Claim(s) objected to: _____.

    Claim(s) rejected: <u>1-3,5,7-15,20-24,26-28,30,33,39-41,43,45-53,58-62,64-66 and 68</u>.

    Claim(s) withdrawn from consideration: _____.

<u>AFFIDAVIT OR OTHER EVIDENCE</u>

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome <u>all</u> rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

<u>REQUEST FOR RECONSIDERATION/OTHER</u>

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.

13. ☒ Other: <u>See Continuation Sheet</u>.

Bryce P Bonzo
Primary Examiner
Art Unit: 2113

Continuation of 13. Other: See attached Final Official Action for reasoning of the rejections..

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,252	11/26/2003	Brian C. Demsky	MIS-00401	6061

7590   01/25/2006

Patent Group
Choate, Hall & Stewart
Exchange Place
53 State Street
Boston, MA 02109-2804

EXAMINER
BONZO, BRYCE P

ART UNIT	PAPER NUMBER
2113	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/723,252	DEMSKY ET AL.
	Examiner	Art Unit	
	Bryce P. Bonzo	2113	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 October 2005</u>.

2a)☒ This action is FINAL. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-80</u> is/are pending in the application.

    4a) Of the above claim(s) _____ · is/are withdrawn from consideration.

5)☒ Claim(s) <u>4,6,16-19,25,29,31,32,34,38-42,44,54-57,63,67 and 69-76</u> is/are allowed.

6)☒ Claim(s) <u>1-3,5,7-15,20-24,26-28,30,33,39-41,43,45-53,58-62,64-66,68,71 and 77-80</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>26 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

FINAL OFFICIAL ACTION

Status of the Claims

Claims 4, 6, 16-19, 25, 29, 31 ,32, 34, 38-42, 44, 54-57, 63, 67 and 69-76 are allowed.

Claims 1-3, 5, 7-15, 20, 21, 39-41, 43, 45-53, 58 and 59 are rejected under 35 USC §102(b).

Claims 22-24, 26-28, 30, 33, 60-62, 64-66, 68, 71 and 77-80 are rejected under 35 USC §102 (e).

Rejections under 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5, 7-15, 20, 21, 39-41, 43, 45-53, 58 and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Jas (United States Patent Publication No. US 2002/0059260 A1).

As per the claims, Jas discloses:

1. A method for detecting an inconsistent data structure comprising:

receiving a specification describing at least one consistency constraint of a data structure (page 4, ¶56-62); and

dynamically determining during execution of a program whether said data structure violates said at least one consistency constraint (page 6, ¶81), wherein said program configured to perform said dynamically determining as part of consistency checking processing in accordance with one or more of: a signal handler that processes a fault (page 7, ¶85, ¶87-89), a consistency check of only a portion of said data structure at a first portion of said data structure at a first execution point in accordance with either a previous usage of said portion or a subsequent usage of said portion within said program, or at least one user specified execution program.

2. The method of claim 1, wherein said specification comprises at least one logical formula (page 4, ¶56-62).

3. The method of claim 2, wherein said specification includes at least one consistency constraint expressed in terms of said data structure (page 4, ¶61).

5. The method of claim 3, wherein said specification includes a description of said data structure (page 4, ¶56).

7. The method of claim 1, further comprising:

representing said data structure as an abstract model (page 4, ¶56); and

determining consistency constraint violations of said abstract model (page 5, ¶71).

8. The method of claim 7, wherein said specification includes a description of said data structure (page 4, ¶61).

9. The method of claim 8, wherein said specification includes an abstract model definition (page 4, ¶61).

10. The method of claim 9, wherein said specification includes an internal constraint in terms of said abstract model definition (page 4, ¶61).

11. The method of claim 10, further comprising: determining if said internal constraint is violated in accordance with an evaluation of said internal constraint (page 4, ¶71).

12. The method of claim 11, wherein said specification includes at least one external constraint mapping elements of said abstract model to elements of said data structure (page 6, ¶80).

13. The method of claim 10, wherein said description of said abstract model includes at least one model definition rule and at least one declaration for one of: a set and a relation, said at least one model definition rule representing an element of said data structure in at least one of a set and a relation (page 4, ¶¶55-56).

14. The method of claim 13, wherein said specification includes at least one external constraint mapping elements of said abstract model to elements of said data structure (page 6, ¶80).

15. The method of claim 1, wherein said dynamically determining is performed in response to at least one of: an explicit call and a transfer of control to an error handler (page 9, ¶105: creation and modification are explicit calls).

20. The method of claim 1, further comprising: determining whether a memory reference in connection with said data structure is valid in accordance with currently allocated memory of said program (page 5, ¶72).

21. The method of claim 1, further comprising: repairing said data structure if said data structure violates said at least one consistency constraint (page 8, ¶94 repair by deletion).

Claims 39-41, 43, 45-53, 58 and 59 are the computer program product embodiments of the method of dynamic repair as disclosed in claims 1-3, 5, 7-15, 20 and 21. As such the claims 39-41, 43, 45-53, 58 and 59 are rejected on the same portions of Jas and the supporting paragraphs providing the programming structure.

Claims 22-24, 26-28, 60-62 and 64-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Applin (United States Patent Application Publication US 2004/0015876 A1).

As per the claims, Applin discloses:

22. A method of dynamically repairing an inconsistent data structure during program execution comprising:

receiving at least one inconsistency violation (page 2, ¶15);

selecting a repair to correct said at least one inconsistency violation (page 2, ¶16); and

repairing said inconsistent data structure (page 2, ¶16: recovery state), said repairing including modifying at least a portion of said inconsistent data structure (page 2, ¶15: providing a default Value).

23. The method of claim 22, further comprising: resuming execution of said program (page 2, ¶16: continue with reduced functionality).

24. The method of claim 22, further comprising: performing said repair and satisfying said consistency constraint (page 2, ¶16: waiting for user to repair).

26. The method of claim 22, further comprising: repairing said inconsistent data structure in accordance with an internal consistency constraint (page 2, ¶16: waiting for user to repair).

27. The method of claim 22, further comprising: selecting a repair from a plurality of repairs in accordance with a cost associated with each repair (page 2, ¶16: waiting for user repair or automatically switching to recovery mode: the cost has been evaluated in time).

28. The method of claim 27, wherein said cost is user specified (page 2, ¶16: the user programs the program to carry out one option or the other).

Claims 60-62 and 64-66 are the computer program product embodiments of the method of dynamic repair as disclosed in claims 22-24 and 26-28. As such the claims 60-62 and 64-66 rejected on the same portions of Applin and the supporting paragraphs providing the programming structure.

Claims 30, 33, 77, 78, 68, 71, 79 and 80 are rejected under 35 U.S.C. 102(e) as being anticipated by Burrows (United States Patent Application Publication US2003/0125290 A1).

As per the claims Burrows discloses:

30. A method of handling an invalid memory reference comprising (page 1, ¶1):

determining whether a memory reference associated with an operation is invalid (Page 1, ¶9); and

if said memory reference is invalid, performing an action selected in accordance with a type of said operation, wherein said type includes at last one of a read operation or a write operation in place of performing said operation (page 6, ¶52 for reads, ¶53 for writes).

33. The method of claim 30, wherein said invalid memory access is determined during execution of said program (page 5, ¶43).

77. The method of claim 30, wherein said action includes performing at least one of: no action at all (¶51), discarding said operation, reading a location other than a location specified by the invalid memory reference, writing to a location other than a location specified by the invalid memory reference, writing a value other than a value specified by the invalid memory reference, or supply a default value.

78. The method of claim 30, wherein there are at least two actions and a first of said of actions supplies a different value than a second of said actions (¶52,53).

Claims 68, 71, 79 and 80 are the computer program product embodiments of the method of dynamic repair as disclosed in claims30, 33, 77 and 78. As such the claims 68, 71, 79 and 80 rejected on the same portions of Burrows and the supporting paragraphs providing the programming structure.

Allowable Matter

Claims 4, 6, 16-19, 25, 29, 31 ,32, 34, 38-42, 44, 54-57, 63,.67 and 69-76 are allowed.

Response to Applicants Arguments

Applicants arguments have been considered and the rejections amended to meet the limitations added by Applicant.

Final Disposition

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryce P. Bonzo whose telephone number is (571)272-3655. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571)272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bryce P Bonzo
Primary Examiner
Art Unit 2113